

## F TENT COOPERATION TREATY

## From the INTERNATIONAL BUREAU

PCT

## **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

Date of mailing (day/month/year) 24 April 2001 (24.04.01)	Washington, D.C. ETATS-UNIS D'AMERIQUE in its capacity as elected Office
International application No. PCT/JP00/05542	Applicant's or agent's file reference 1227
International filing date (day/month/year) 18 August 2000 (18.08.00)	Priority date (day/month/year) 18 August 1999 (18.08.99)
Applicant  TAKAHASHI, Tomoya et al	

- 1. The designated Office is hereby notified of its election made:**

in the demand filed with the International Preliminary Examining Authority on:

16 March 2001 (16.03.01)

in a notice effecting later election filed with the International Bureau on:

2. The election  was  
 was

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p><b>The International Bureau of WIPO</b>  <b>34, chemin des Colombettes</b>  <b>1211 Geneva 20, Switzerland</b></p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p><b>Authorized officer</b></p> <p><b>Maria Kirchner</b></p> <p>Telephone No.: (41-22) 338.83.38</p>
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## 4. 育毛剤・養毛剤

「ハサウェンス」 社団法 日本毛髪科学協会 / 1986  
す。男性ホルモンに拮抗するものとしてエストロジエンがありますが、殺菌剤、清涼刺激剤、止痒剤、フケ止め剤などを配合し、50%程度のアルコールに溶かした製品が普通的なものと思つてよいでしょう。

### 1) 育毛剤の分類と成分

育毛剤は、近来異常なほどの人気製品で、現在80社、130品目が市販され、大変な市場であるといわれています。  
育毛剤は、剤型としてはヘアトニックに属し、その目的としては、脱毛を防ぎ、発毛促進作用が期待される製品です。

薬事法の上から育毛剤を分類すると、医薬品の扱いを受けるものと、医薬部外品の扱いを受けるものとの2種に分類されます。医薬品として取り扱われる製品は数が非常に少なく、ほとんど大部分は医薬部外品に属する育毛剤です。

医薬品扱いの製品が少ない理由は、新規原料の発毛促進効果を動物実験および臨床実験において証明し、しかも厳重な安全性試験にパスしなければならず、そのためには多額の研究費と時間を要し、容易に開発に着手することができないからです。

一方医薬部外品は、薬事法においてあらましその成分が指定され、その成分を適量配合して申請すれば、簡単に承認、製造販売することができます。

なお、医薬品と医薬部外品の区別は、医薬品は内容成分の表示を必要とし、医薬部外品は「医薬部外品」の5文字を記載しなければなりません。

医薬部外品に該当する育毛剤の効能には、「育毛、薄毛、円形脱毛症、かゆみ、脱毛の予防、毛生促進、発毛促進、発毛不全、ふけ、斑状性脱毛症、病後産後の脱毛、整毛、若毛、脂漏性脱毛症」があげられています。

育毛剤の成分としては、血管拡張作用があるもの（塩化カルプロニウム、セントリエキス、ビタミンE）、刺激作用によるヒフ機能促進、血行促進作用があるもの（カンタリスチンキ、ショウキヨウチンキ、トウガラシチンキ、ニコチニ酸メチルなど）、細胞賦活作用その他があるもの（感光素、ヒノキチオール、セファランチン、パントテン酸カルシウム、アラセンタエキスなど）がありま

### 2) 育毛剤の使用

薄毛、脱毛の悩みを持つ人は850万人とも900万人ともいわれていますが、明らかに病的な脱毛症患者はヒツ科で治療を受けるでしょうが、軽度の脱毛、薄毛、男性型脱毛症などの人は、育毛剤の使用によって処置することが益んです。その際、育毛剤の効果をよりよく發揮させるためには、使用法に配慮が必要です。

#### ① 患部を加温すること

シャンプー後はスチームや赤外線ランプを使用し、50~55°Cで10~15分間加温します。血行がよくなり、ヒフ機能が亢進するといわれています。

#### ② シャンプーを頻繁に行うこと

シャンプーはヘアケアの項で述べたように頭皮、毛髪を清潔に保つ目的のために、頭皮の新陳代謝を活性化にし、発毛促進をなすけます。脂性の人、男性型脱毛症の人などは意識的にシャンプーを刷り行ることが大切です。

#### ③ 育毛剤の外用とマッサージ

毛根は毛細血管にとりまかれています。そして毛乳頭から毛の栄養となる成分が入りこむのですから、血行を良くするためのマッサージをすることが大切です。その方法は毛をすり合わせるのではなく、地肌を動かすつもりで行わなければなりません。この時に育毛剤を外用しながら行うことが必要です。マッサージのこつは下から頭頂に向って行うことです。

#### ④ 育毛剤の対象となる主な疾患

##### a 円形脱毛症

円形脱毛症は、医療の対象となっていますが、本症には非常に軽度から重症まであります。

単発型（円形脱毛症の項参照）を軽症とした場合、自然に放置していくても

#### 4. Hair-growing agents, hair-nourishing agents

##### 1) Classification of hair-growing agents and their components

5 In recent years, hair-growing agents have been enjoying extraordinary popularity and their industry is said to have become a huge market of 130 items from 80 companies at present.

10 Hair-growing agents are products which belong to the preparation form of hair tonic and which are expected to be effective for preventing hair loss and promoting hair growth.

15 According to the Pharmaceutical Affairs Law, hair-growing agents are classified into two groups: those treated as drugs and those treated as quasi-drugs. The number of products treated as drugs is very small and most of hair-growing agents are quasi-drugs. The reason why the number of products treated as drugs is very small is that the development of such products are not easy. To be 20 approved as a drug, a novel material contained in the product must be proved to have the hair growth-promoting effect by animal and clinical tests and must pass the strict safety test, which requires a large amount of research expenses and time.

25 On the other hand, products applied as quasi-drugs can be easily approved, manufactured and put on the market if only they contain appropriate amounts of components roughly specified in the Pharmaceutical Affairs Law.

30 The distinction between drugs and quasi-drugs is as follows: drugs require the indication of the components comprised, and quasi-drugs need the description of "quasi-drugs".

35 The effects of hair-growing agents as quasi-drugs include hair growth, thin hair, alopecia areata, itch, prevention of hair loss, hair growth promotion, insufficient hair growth, scurf, alopecia by pityriasis

capitis, hair loss after illness and childbirth, hair nourishment, premature alopecia and seborrheic alopecia.

- The components of a hair-growing agent include those having vasodilator activity (e.g. carpronium chloride,
- 5 extract of Swertia japonica Makino and vitamin E), those having skin function-promoting and blood circulation-promoting activity due to irritant action (e.g. cantharis tincture, ginger tincture, capsicum tincture and methyl nicotinate) and those having cell activating activity, etc.
- 10 (e.g. photosensitizing dye, hinokitiol, cepharanthin, calcium pantothenate and placenta extract). General hair-growing agents are prepared by dissolving estrogen which antagonizes the male hormone, a microbicide, a refreshing stimulant, an itch-reliever, a scurf stopper, etc. in ca.
- 15 50% alcohol.

"Hair Science" Japan Hair Science Association (1986)

連合会広報委員会によりとりまとめられたものを使用した。

### a. ヘアケア製品の化学的分類

#### 1) 殺菌, 防腐剤 germicides, preservatives

安息香酸およびその塩類, イソプロピルメチルフェノール, ウンデシレン酸およびその塩類, ウンデシレン酸モノエタノールアミド, 塩化ベンザルコニウム, 塩化ベンゼトニウム, 塩酸アルキルジアミノエチルグリシン, 塩酸クロルヘキシジン, オルトフェニルフェノール, グルコン酸クロルヘキシジン, クレゾール, クロラミンT, クロルキシレノール, クロルクレゾール, クロルフェネシン, クロロブタノール, サリチル酸およびその塩類, 臭化アルキルイソキンリニウム, 臭化ドミフェン, ソルビン酸およびその塩類, チモール, チラム, デヒドロ酢酸およびその塩類, トリクロサン, トリクロロカルバニリド, パラオキシ安息香酸エステル, パラクロルフェノール, ハロカルバン, フェノール, ヘキサクロロフェン, ラウロイルサルコシンナトリウム, レゾルシン。

#### 2) 紫外線吸収剤 ultraviolet absorbants

オキシベンゾン, サリチル酸フェニル, シノキサート, パラアミノ安息香酸エステル, 2-(2-ヒドロキシ-5-メチルフェニル)-ベンゾトリアゾール。

#### 3) ホルモン類 hormones

各種ホルモン。

#### 4) 酸化防止剤 antioxidants

カテコール, ジプチルヒドロキシトルエン, ピロガロール, プチルヒドロキシアニソール, 没食子酸プロピル。

#### 5) ビタミン類 vitamins

酢酸-*dl*- $\alpha$ -トコフェロール, *dl*- $\alpha$ -トコフェロール, ニコチン酸ベンジル。

#### 6) 抗ヒスタミン剤, 消炎剤 antihistaminics, antiinflammatory agents

塩酸ジフェンヒドラミン, グアイアズレン, グアイアズレンスルホン酸ナトリウム。

#### 7) 毛根刺激剤 hair root stimulants

カンタリスチンキ, ショウキヨウチンキ, トウガラシチンキ, ノニル酸バニリルアミド。

#### 8) 収れん剤 astringents

イクタモール, パラフェノールスルホン酸亜鉛。

#### 9) 酶素類 enzymes

塩化リゾチーム。

#### 10) 多価アルコール類, 保湿剤 polyols, humectants

プロピレングリコール, ポリエチレングリコール。

検印省略

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63.10.12

a. Chemical classification of hair care products

1) Germicides, preservatives

- benzoic acid and salts thereof, isopropyl methylphenol,  
5 undecylenic acid and salts thereof, undecylenic acid  
monoethanolamide, benzalkonium chloride, benzethonium  
chloride, alkyldiaminoethylglycin hydrochloride,  
chlorohexidine hydrochloride, orthophenylphenol,  
chlorohexidine gluconate, cresol, chloramine T,  
10 chloroxylenol, chlorocresol, chlorphenesin, chlorobutanol,  
salicylic acid and salts thereof, alkylisoquinolinium  
bromide, domiphen bromide, sorbic acid and salts thereof,  
thymol, thiram, dehydroacetic acid and salts thereof,  
triclosan, trichlorocarbanilide, p-oxybenzoate, p-  
15 chlorophenol, halocarban, phenol, hexachlorophene, sodium  
lauroylsarcosinate and resorcin

2) Ultraviolet absorbants

- oxybenzone, phenyl salicylate, cinoxate, p-aminobenzoate  
20 and 2-(2-hydroxy-5-methylphenyl)-benzotriazole

3) Hormones

various hormones

25 4) Antioxidants

catechol, dibutylhydroxytoluene, pyrogallol,  
butylhydroxyanisole and propyl gallate

5) Vitamins

- 30 dl- $\alpha$ -tocopherol acetate, dl- $\alpha$ -tocopherol and benzyl  
nicotinate

6) Antihistaminics, antiinflammatory agents

- diphenhydramine hydrochloride, guiazulene and sodium  
35 guiazulene sulfonate

**7) Hair root stimulants**

cantharis tincture, ginger tincture, capsicum tincture and  
nonylic acid vanillylamine

5   **8) Astringents**

ichthammol and zinc paraphenol sulfonate

**9) Enzymes**

lysozyme chloride

10

**10) Polyols, humectants**

propylene glycol and polyethylene glycol

"Ke no Igaku" (Medical Science of Hair) 1st ed.

15   (June 23, 1987)

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## 特許協力条約

PCT

## 国際予備審査報告

(法第12条、法施行規則第56条)  
〔PCT36条及びPCT規則70〕

REC'D 12 OCT 2001

WIPO

PCT

出願人又は代理人 の書類記号 1227	今後の手続きについては、国際予備審査報告の送付通知（様式PCT/IPEA/416）を参照すること。	
国際出願番号 PCT/JP00/05542	国際出願日 (日.月.年) 18.08.00	優先日 (日.月.年) 18.08.99
国際特許分類 (IPC) Int. Cl' A61K 7/06		
出願人（氏名又は名称） 協和醸酵工業株式会社		

1. 国際予備審査機関が作成したこの国際予備審査報告を法施行規則第57条（PCT36条）の規定に従い送付する。

2. この国際予備審査報告は、この表紙を含めて全部で 4 ページからなる。

この国際予備審査報告には、附属書類、つまり補正されて、この報告の基礎とされた及び／又はこの国際予備審査機関に対して訂正を含む明細書、請求の範囲及び／又は図面も添付されている。  
(PCT規則70.16及びPCT実施細則第607号参照)  
この附属書類は、全部で        ページである。

3. この国際予備審査報告は、次の内容を含む。

- I  国際予備審査報告の基礎
- II  優先権
- III  新規性、進歩性又は産業上の利用可能性についての国際予備審査報告の不作成
- IV  発明の単一性の欠如
- V  PCT35条(2)に規定する新規性、進歩性又は産業上の利用可能性についての見解、それを裏付けるための文献及び説明
- VI  ある種の引用文献
- VII  国際出願の不備
- VIII  国際出願に対する意見

国際予備審査の請求書を受理した日 16.03.01	国際予備審査報告を作成した日 27.09.01
名称及びあて先 日本国特許庁 (IPEA/JP) 郵便番号 100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官（権限のある職員） 大宅 郁治 電話番号 03-3581-1101 内線
	4C 8829

## I. 国際予備審査報告の基礎

1. この国際予備審査報告は下記の出願書類に基づいて作成された。(法第6条(PCT14条)の規定に基づく命令に応答するために提出された差し替え用紙は、この報告書において「出願時」とし、本報告書には添付しない。PCT規則70.16, 70.17)

 出願時の国際出願書類

- |   |        |                      |
|---|--------|----------------------|
| <input type="checkbox"/> 明細書 第 _____        | ページ、   | 出願時に提出されたもの          |
| 明細書 第 _____                                 | ページ、   | 国際予備審査の請求書と共に提出されたもの |
| 明細書 第 _____                                 | ページ、   | 付の書簡と共に提出されたもの       |
| <input type="checkbox"/> 請求の範囲 第 _____      | 項、     | 出願時に提出されたもの          |
| 請求の範囲 第 _____                               | 項、     | PCT19条の規定に基づき補正されたもの |
| 請求の範囲 第 _____                               | 項、     | 国際予備審査の請求書と共に提出されたもの |
| 請求の範囲 第 _____                               | 項、     | 付の書簡と共に提出されたもの       |
| <input type="checkbox"/> 図面 第 _____         | ページ/図、 | 出願時に提出されたもの          |
| 図面 第 _____                                  | ページ/図、 | 国際予備審査の請求書と共に提出されたもの |
| 図面 第 _____                                  | ページ/図、 | 付の書簡と共に提出されたもの       |
| <input type="checkbox"/> 明細書の配列表の部分 第 _____ | ページ、   | 出願時に提出されたもの          |
| 明細書の配列表の部分 第 _____                          | ページ、   | 国際予備審査の請求書と共に提出されたもの |
| 明細書の配列表の部分 第 _____                          | ページ、   | 付の書簡と共に提出されたもの       |

2. 上記の出願書類の言語は、下記に示す場合を除くほか、この国際出願の言語である。

上記の書類は、下記の言語である \_\_\_\_\_ 語である。

- 国際調査のために提出されたPCT規則23.1(b)にいう翻訳文の言語
- PCT規則48.3(b)にいう国際公開の言語
- 国際予備審査のために提出されたPCT規則55.2または55.3にいう翻訳文の言語

3. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際予備審査報告を行った。

- この国際出願に含まれる書面による配列表
- この国際出願と共に提出されたフレキシブルディスクによる配列表
- 出願後に、この国際予備審査(または調査)機関に提出された書面による配列表
- 出願後に、この国際予備審査(または調査)機関に提出されたフレキシブルディスクによる配列表
- 出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった
- 書面による配列表に記載した配列とフレキシブルディスクによる配列表に記録した配列が同一である旨の陳述書の提出があった。

4. 補正により、下記の書類が削除された。

- 明細書 第 \_\_\_\_\_ ページ
- 請求の範囲 第 \_\_\_\_\_ 項
- 図面 図面の第 \_\_\_\_\_ ページ/図

5.  この国際予備審査報告は、補充欄に示したように、補正が出願時における開示の範囲を越えてされたものと認められるので、その補正がされなかったものとして作成した。(PCT規則70.2(c) この補正を含む差し替え用紙は上記1.における判断の際に考慮しなければならず、本報告に添付する。)

## IV. 発明の単一性の欠如

1. 請求の範囲の減縮又は追加手数料の納付の求めに対して、出願人は、
- 請求の範囲を減縮した。
- 追加手数料を納付した。
- 追加手数料の納付と共に異議を申立てた。
- 請求の範囲の減縮も、追加手数料の納付もしなかった。
2.  国際予備審査機関は、次の理由により発明の単一性の要件を満たしていないと判断したが、PCT規則68.1の規定に従い、請求の範囲の減縮及び追加手数料の納付を出願人に求めないこととした。

## 3. 国際予備審査機関は、PCT規則13.1、13.2及び13.3に規定する発明の単一性を次のように判断する。

- 満足する。
- 以下の理由により満足しない。

請求の範囲1～4及び7は、リゾホスファチジン酸又は特定の構造で限定されたホスファチジン酸を含有する育毛剤に関するものであり、また、請求の範囲8～18及び20～22は、リゾホスファチジン酸又は請求の範囲1～4及び7に記載の特定の構造での限定を有さないホスファチジン酸を含有する育毛剤に関するものである。そして、請求の範囲8～18及び20～22は、選択肢の一つであるホスファチジン酸に関し、請求の範囲1～4及び7に記載の特定の構造での限定を有さないことから、これら2つの発明群が単一の一般的発明概念を形成するように連関している一群の発明であるとは認められない。

## 4. したがって、この国際予備審査報告書を作成するに際して、国際出願の次の部分を、国際予備審査の対象にした。

- すべての部分
- 請求の範囲 \_\_\_\_\_ に関する部分

## V. 新規性、進歩性又は産業上の利用可能性についての法第12条（PCT35条(2)）に定める見解、それを裏付ける文献及び説明

## 1. 見解

新規性 (N)

請求の範囲 1 乃至 2 2

有

請求の範囲

無

進歩性 (I S)

請求の範囲 1 乃至 2 2

有

請求の範囲

無

産業上の利用可能性 (I A)

請求の範囲 1 乃至 2 2

有

請求の範囲

無

## 2. 文献及び説明 (PCT規則70.7)

## 1. 文献

文献1 : US 4515778 A (Kastell; Wolfgang) 7 May 1985 (07.05.85)

文献2 : EP 102534 A (LION CORPORATION) 14 March 1984 (14.03.84)

文献3 : DE 4113346 A (Lang, Erich) 29 October 1992 (29.10.92)

文献4 : WO 96/00561 A (協和醸酵工業株式会社) 11 1月 1996 (11.01.96)

文献5 : EP 797978 A (Kyowa Hakko Kogyo Co., Ltd) 1 10月 1997 (01.10.97)

## 2. 説明

文献1にはホスファチジル酸を含有する脱毛防止及び毛髪成長刺激用薬剤が、文献2には奇数の炭素鎖長を有する脂肪酸残基を有するホスファチジン酸を含む養毛剤が、文献3にはリン脂質混合物を含む育毛剤が、文献4にはプロアントシアニジンを含有する育毛剤が、文献5にはプロテインキナーゼC特異的阻害剤を含有する育毛剤が記載されている。しかしながら、これら文献には、リゾホスファチジン酸又は脂肪酸残基部分が偶数かつ直鎖の炭素鎖の脂肪酸残基のみから構成されるホスファチジン酸が育毛作用を有することは記載されておらず、また、リゾホスファチジン酸又はホスファチジン酸と、プロアントシアニジン、プロテインキナーゼC特異的阻害剤又はトコフェロールの1種以上を組み合わせた育毛剤も記載されていない。

E P

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## 特許協力条約

## 国際調査報告

(法8条、法施行規則第40、41条)  
〔PCT18条、PCT規則43、44〕

出願人又は代理人 の書類記号 1227	今後の手続きについては、国際調査報告の送付通知様式(PCT/ISA/220)及び下記5を参照すること。	
国際出願番号 PCT/JP00/05542	国際出願日 (日.月.年) 18.08.00	優先日 (日.月.年) 18.08.99
出願人(氏名又は名称) 協和醸酵工業株式会社		

国際調査機関が作成したこの国際調査報告を法施行規則第41条(PCT18条)の規定に従い出願人に送付する。この写しは国際事務局にも送付される。

この国際調査報告は、全部で 4 ページである。

この調査報告に引用された先行技術文献の写しも添付されている。

1. 国際調査報告の基礎
  - a. 言語は、下記に示す場合を除くほか、この国際出願がされたものに基づき国際調査を行った。
  この国際調査機関に提出された国際出願の翻訳文に基づき国際調査を行った。
  - b. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際調査を行った。
  この国際出願に含まれる書面による配列表
  この国際出願と共に提出されたフレキシブルディスクによる配列表
  出願後に、この国際調査機関に提出された書面による配列表
  出願後に、この国際調査機関に提出されたフレキシブルディスクによる配列表
  出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった。
  書面による配列表に記載した配列とフレキシブルディスクによる配列表に記録した配列が同一である旨の陳述書の提出があった。
2.  請求の範囲の一部の調査ができない(第I欄参照)。
3.  発明の単一性が欠如している(第II欄参照)。
4. 発明の名称は
  出願人が提出したものと承認する。
  次に示すように国際調査機関が作成した。

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5. 要約は
  出願人が提出したものと承認する。
  第III欄に示されているように、法施行規則第47条(PCT規則38.2(b))の規定により国際調査機関が作成した。出願人は、この国際調査報告の発送の日から1ヶ月以内にこの国際調査機関に意見を提出することができる。
6. 要約書とともに公表される図は、  
第 \_\_\_\_\_ 図とする。 出願人が示したとおりである.  なし
  - 出願人は図を示さなかった。
  - 本図は発明の特徴を一層よく表している。

## 第I欄 請求の範囲の一部の調査ができないときの意見（第1ページの2の続き）

法第8条第3項（PCT第17条(2)(a)）の規定により、この国際調査報告は次の理由により請求の範囲の一部について作成しなかった。

1.  請求の範囲 \_\_\_\_\_ は、この国際調査機関が調査をすることを要しない対象に係るものである。つまり、
2.  請求の範囲 \_\_\_\_\_ は、有意義な国際調査をすることができる程度まで所定の要件を満たしていない国際出願の部分に係るものである。つまり、
3.  請求の範囲 \_\_\_\_\_ は、従属請求の範囲であってPCT規則6.4(a)の第2文及び第3文の規定に従って記載されていない。

## 第II欄 発明の単一性が欠如しているときの意見（第1ページの3の続き）

次に述べるようにこの国際出願に二以上の発明があるとこの国際調査機関は認めた。

請求の範囲1～4及び7は、リゾホスファチジン酸又は特定の構造で限定されたホスファチジン酸を含有する育毛剤に関するものであり、また、請求の範囲8～18及び20～22は、リゾホスファチジン酸又は請求の範囲1～4及び7に記載の特定の構造での限定を有さないホスファチジン酸を含有する育毛剤に関するものである。そして、請求の範囲8～18及び20～22は、選択肢の一つであるホスファチジン酸に関し、請求の範囲1～4及び7に記載の特定の構造での限定を有さないことから、これら2つの発明群が単一の一般的発明概念を形成するように連関している一群の発明であるとは認められない。

1.  出願人が必要な追加調査手数料をすべて期間内に納付したので、この国際調査報告は、すべての調査可能な請求の範囲について作成した。
2.  追加調査手数料を要求するまでもなく、すべての調査可能な請求の範囲について調査することができたので、追加調査手数料の納付を求めなかった。
3.  出願人が必要な追加調査手数料を一部のみしか期間内に納付しなかったので、この国際調査報告は、手数料の納付のあった次の請求の範囲のみについて作成した。
4.  出願人が必要な追加調査手数料を期間内に納付しなかったので、この国際調査報告は、請求の範囲の最初に記載されている発明に係る次の請求の範囲について作成した。

## 追加調査手数料の異議の申立てに関する注意

- 追加調査手数料の納付と共に出願人から異議申立てがあった。
- 追加調査手数料の納付と共に出願人から異議申立てがなかった。

## A. 発明の属する分野の分類(国際特許分類(IPC))

Int. Cl' A61K 7/06

## B. 調査を行った分野

調査を行った最小限資料(国際特許分類(IPC))

Int. Cl' A61K 7/06

最小限資料以外の資料で調査を行った分野に含まれるもの

国際調査で使用した電子データベース(データベースの名称、調査に使用した用語)

## C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	US 4515778 A (Kastell; Wolfgang) 7 May 1985 (07. 05. 85) & JP 57-165309 A & EP 60933 A	1-22
A	EP 102534 A (LION CORPORATION) 14 March 1984 (14. 03. 84) & JP 59-27809 A	1-22
A	DE 4113346 A (Lang, Erich) 29 October 1992 (29. 10. 92) (ファミリーなし)	1-22

 C欄の続きにも文献が列挙されている。 パテントファミリーに関する別紙を参照。

## \* 引用文献のカテゴリー

「A」特に関連のある文献ではなく、一般的技術水準を示すもの

「E」国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの

「L」優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献(理由を付す)

「O」口頭による開示、使用、展示等に言及する文献

「P」国際出願日前で、かつ優先権の主張の基礎となる出願

## の日の後に公表された文献

「T」国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの

「X」特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの

「Y」特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの

「&amp;」同一パテントファミリー文献

国際調査を完了した日 14.11.00	国際調査報告の発送日 201100
国際調査機関の名称及びあて先 日本国特許庁 (ISA/JP) 郵便番号100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官(権限のある職員) 大宅 郁治 印 4C 8829 電話番号 03-3581-1101 内線 3452

C (続き) 関連すると認められる文献		
引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	WO 96/00561 A (協和醸酵工業株式会社) 11 1月 1996 (11.01.96) & EP 768079 A	9-11, 13-14, 16-22
A	EP 797978 A (Kyowa Hakko Kogyo Co., Ltd) 1 10月 1997 (01.10.97) & JP 9-315947 A	8, 11-22

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum)

1227

**Box No. I TITLE OF INVENTION**  
HAIR-GROWING AGENT

**Box No. II APPLICANT**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

KYOWA HAKKO KOGYO CO., LTD.

6-1, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8185  
Japan

This person is also inventor.

Telephone No. 03-3282-0036

Faximile No. 03-3282-1527

Teleprinter No.

State (that is, country) of nationality:

JP

State (that is, country) of residence:

JP

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Tomoya Takahashi

c/o Tsukuba Research Laboratories  
KYOWA HAKKO KOGYO CO., LTD.  
2, Miyukigaoka, Tsukuba-shi, Ibaraki 305-0841 Japan

This person is:

applicant only

applicant and inventor

inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JP

State (that is, country) of residence:

JP

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on a continuation sheet.

**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

agent

common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Telephone No.

Facsimile No.

Teleprinter No.

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

*If none of the following sub-boxes is used, this sheet should not be included in the request.*

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Ayako Kamimura

c/o Tsukuba Research Laboratories  
KYOWA HAKKO KOGYO CO., LTD.  
2, Miyukigaoka, Tsukuba-shi, Ibaraki 305-0841  
Japan

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: JP

State (that is, country) of residence: JP

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Takako Matsuoka

2273-1, Ikuwa-cho, Yokkaichi-shi, Mie 512-0911  
Japan

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: JP

State (that is, country) of residence: JP

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

 Further applicants and/or (further) inventors are indicated on another continuation sheet.

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

**Regional Patent**

- AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- EP** European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroons, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (*If other kind of protection or treatment desired, specify on dotted line*)

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>AE</b> United Arab Emirates                 | <input checked="" type="checkbox"/> <b>LR</b> Liberia                                   |
| <input checked="" type="checkbox"/> <b>AL</b> Albania                              | <input checked="" type="checkbox"/> <b>LS</b> Lesotho                                   |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia                              | <input checked="" type="checkbox"/> <b>LT</b> Lithuania                                 |
| <input checked="" type="checkbox"/> <b>AT</b> Austria                              | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg                                |
| <input checked="" type="checkbox"/> <b>AU</b> Australia                            | <input checked="" type="checkbox"/> <b>LV</b> Latvia                                    |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan                           | <input checked="" type="checkbox"/> <b>MA</b> Morocco                                   |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina               | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova                       |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados                             | <input checked="" type="checkbox"/> <b>MG</b> Madagascar                                |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria                             | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil                               | <input checked="" type="checkbox"/> <b>MN</b> Mongolia                                  |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus                              | <input checked="" type="checkbox"/> <b>MW</b> Malawi                                    |
| <input checked="" type="checkbox"/> <b>CA</b> Canada                               | <input checked="" type="checkbox"/> <b>MX</b> Mexico                                    |
| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein | <input checked="" type="checkbox"/> <b>NO</b> Norway                                    |
| <input checked="" type="checkbox"/> <b>CN</b> China                                | <input checked="" type="checkbox"/> <b>NZ</b> New Zealand                               |
| <input checked="" type="checkbox"/> <b>CR</b> Costa Rica                           | <input checked="" type="checkbox"/> <b>PL</b> Poland                                    |
| <input checked="" type="checkbox"/> <b>CU</b> Cuba                                 | <input checked="" type="checkbox"/> <b>PT</b> Portugal                                  |
| <input checked="" type="checkbox"/> <b>CZ</b> Czech Republic                       | <input checked="" type="checkbox"/> <b>RO</b> Romania                                   |
| <input checked="" type="checkbox"/> <b>DE</b> Germany                              | <input checked="" type="checkbox"/> <b>RU</b> Russian Federation                        |
| <input checked="" type="checkbox"/> <b>DK</b> Denmark                              | <input checked="" type="checkbox"/> <b>SD</b> Sudan                                     |
| <input checked="" type="checkbox"/> <b>DM</b> Dominica                             | <input checked="" type="checkbox"/> <b>SE</b> Sweden                                    |
| <input checked="" type="checkbox"/> <b>EE</b> Estonia                              | <input checked="" type="checkbox"/> <b>SG</b> Singapore                                 |
| <input checked="" type="checkbox"/> <b>ES</b> Spain                                | <input checked="" type="checkbox"/> <b>SI</b> Slovenia                                  |
| <input checked="" type="checkbox"/> <b>FI</b> Finland                              | <input checked="" type="checkbox"/> <b>SK</b> Slovakia                                  |
| <input checked="" type="checkbox"/> <b>GB</b> United Kingdom                       | <input checked="" type="checkbox"/> <b>SL</b> Sierra Leone                              |
| <input checked="" type="checkbox"/> <b>GD</b> Grenada                              | <input checked="" type="checkbox"/> <b>TJ</b> Tajikistan                                |
| <input checked="" type="checkbox"/> <b>GE</b> Georgia                              | <input checked="" type="checkbox"/> <b>TM</b> Turkmenistan                              |
| <input checked="" type="checkbox"/> <b>GH</b> Ghana                                | <input checked="" type="checkbox"/> <b>TR</b> Turkey                                    |
| <input checked="" type="checkbox"/> <b>GM</b> Gambia                               | <input checked="" type="checkbox"/> <b>TT</b> Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> <b>HR</b> Croatia                              | <input checked="" type="checkbox"/> <b>TZ</b> United Republic of Tanzania               |
| <input checked="" type="checkbox"/> <b>HU</b> Hungary                              | <input checked="" type="checkbox"/> <b>UA</b> Ukraine                                   |
| <input checked="" type="checkbox"/> <b>ID</b> Indonesia                            | <input checked="" type="checkbox"/> <b>UG</b> Uganda                                    |
| <input checked="" type="checkbox"/> <b>IL</b> Israel                               | <input checked="" type="checkbox"/> <b>US</b> United States of America                  |
| <input checked="" type="checkbox"/> <b>IN</b> India                                | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan                                |
| <input checked="" type="checkbox"/> <b>IS</b> Iceland                              | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam                                  |
| <input checked="" type="checkbox"/> <b>JP</b> Japan                                | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia                                |
| <input checked="" type="checkbox"/> <b>KE</b> Kenya                                | <input checked="" type="checkbox"/> <b>ZA</b> South Africa                              |
| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan                           | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe                                  |
| <input type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea           | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan                                |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea                    | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam                                  |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan                           | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia                                |
| <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia                          | <input checked="" type="checkbox"/> <b>ZA</b> South Africa                              |
| <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka                            | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe                                  |

Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> <b>DZ</b> Democratic People's Republic of Algeria | <input checked="" type="checkbox"/> <b>MZ</b> Mozambique |
| <input checked="" type="checkbox"/> <b>AG</b> Antigua and Barbuda                     | <input checked="" type="checkbox"/> <b>BZ</b> Belize     |

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit)

Box No. VI PRIORITY CLAIMS		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 18/08/99	231144/99	JP		
item (2) 10/05/00	137711/00	JP		
item (3)				

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1), (2)

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (If two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / JP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year) Number Country (or regional Office)

## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request	:	4
description (excluding sequence listing part)	:	29
claims	:	3
abstract	:	1
drawings	:	0
sequence listing part of description	:	0
Total number of sheets	:	37

This international application is accompanied by the item(s) marked below:

1.  fee calculation sheet
2.  separate signed power of attorney
3.  copy of general power of attorney; reference number, if any:
4.  statement explaining lack of signature
5.  priority document(s) identified in Box No. VI as item(s):
6.  translation of international application into (language):
7.  separate indications concerning deposited microorganism or other biological material
8.  nucleotide and/or amino acid sequence listing in computer readable form
9.  other (specify):

Figure of the drawings which should accompany the abstract:

Language of filing of the international application:

JP

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

Tomoya Takahashi

Takako Matsuoka

KYOWA HAKKO KOGYO CO., LTD.

Ayako Kamimura

For receiving Office use only	
1. Date of actual receipt of the purported international application:	2. Drawings:  <input type="checkbox"/> received:  <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA / JP	
6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

## For International Bureau use only

Date of receipt of the record copy  
by the International Bureau:

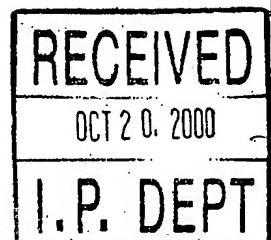
## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
 6-1, Otemachi 1-chome  
 Chiyoda-ku  
 Tokyo 100-8185  
 JAPON



(PCT Rule 24.2(a))

WPAJD

Date of mailing (day/month/year) 13 September 2000 (13.09.00)	<b>IMPORTANT NOTIFICATION</b>
--	-------------------------------

Applicant's or agent's file reference 1227	International application No. PCT/JP00/05542
---	---

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

KYOWA HAKKO KOGYO CO., LTD. (for all designated States except US)  
 TAKAHASHI, Tomoya et al (for US)

International filing date : 18 August 2000 (18.08.00)  
 Priority date(s) claimed : 18 August 1999 (18.08.99)  
                               : 10 May 2000 (10.05.00)

Date of receipt of the record copy by the International Bureau : 04 September 2000 (04.09.00)

List of designated Offices :

AP : GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW  
 EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
 OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 National : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:

  
 Shinji IGARASHI

Telephone No. (41-22) 338.83.38

## Continuation of Form PCT/IB/301

## NOTIFICATION OF RECEIPT OF RECORD COPY

Date of mailing (day/month/year) 13 September 2000 (13.09.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference 1227	International application No. PCT/JP00/05542

**ATTENTION**

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- time limits for entry into the national phase
- confirmation of precautionary designations
- requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

## INFORMATION ON TIME LIMITS FOR ENTERING THE NATIONAL PHASE

The applicant is reminded that the "national phase" must be entered before each of the designated Offices indicated in the Notification of Receipt of Record Copy (Form PCT/IB/301) by paying national fees and furnishing translations, as prescribed by the applicable national laws.

The time limit for performing these procedural acts is **20 MONTHS** from the priority date or, for those designated States which the applicant elects in a demand for international preliminary examination or in a later election, **30 MONTHS** from the priority date, provided that the election is made before the expiration of 19 months from the priority date. Some designated (or elected) Offices have fixed time limits which expire even later than 20 or 30 months from the priority date. In other Offices an extension of time or grace period, in some cases upon payment of an additional fee, is available.

In addition to these procedural acts, the applicant may also have to comply with other special requirements applicable in certain Offices. It is the applicant's responsibility to ensure that the necessary steps to enter the national phase are taken in a timely fashion. Most designated Offices do not issue reminders to applicants in connection with the entry into the national phase.

For detailed information about the procedural acts to be performed to enter the national phase before each designated Office, the applicable time limits and possible extensions of time or grace periods, and any other requirements, see the relevant Chapters of Volume II of the PCT Applicant's Guide. Information about the requirements for filing a demand for international preliminary examination is set out in Chapter IX of Volume I of the PCT Applicant's Guide.

GR and ES became bound by PCT Chapter II on 7 September 1996 and 6 September 1997, respectively, and may, therefore, be elected in a demand or a later election filed on or after 7 September 1996 and 6 September 1997, respectively, regardless of the filing date of the international application. (See second paragraph above.)

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

## CONFIRMATION OF PRECAUTIONARY DESIGNATIONS

This notification lists only specific designations made under Rule 4.9(a) in the request. It is important to check that these designations are correct. Errors in designations can be corrected where precautionary designations have been made under Rule 4.9(b). The applicant is hereby reminded that any precautionary designations may be confirmed according to Rule 4.9(c) before the expiration of 15 months from the priority date. If it is not confirmed, it will automatically be regarded as withdrawn by the applicant. There will be no reminder and no invitation. Confirmation of a designation consists of the filing of a notice specifying the designated State concerned (with an indication of the kind of protection or treatment desired) and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

## REQUIREMENTS REGARDING PRIORITY DOCUMENTS

For applicants who have not yet complied with the requirements regarding priority documents, the following is recalled.

Where the priority of an earlier national, regional or international application is claimed, the applicant must submit a copy of the said earlier application, certified by the authority with which it was filed ("the priority document") to the receiving Office (which will transmit it to the International Bureau) or directly to the International Bureau, before the expiration of 16 months from the priority date, provided that any such priority document may still be submitted to the International Bureau before that date of international publication of the international application, in which case that document will be considered to have been received by the International Bureau on the last day of the 16-month time limit (Rule 17.1(a)).

Where the priority document is issued by the receiving Office, the applicant may, instead of submitting the priority document, request the receiving Office to prepare and transmit the priority document to the International Bureau. Such request must be made before the expiration of the 16-month time limit and may be subjected by the receiving Office to the payment of a fee (Rule 17.1(b)).

If the priority document concerned is not submitted to the International Bureau or if the request to the receiving Office to prepare and transmit the priority document has not been made (and the corresponding fee, if any, paid) within the applicable time limit indicated under the preceding paragraphs, any designated State may disregard the priority claim, provided that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity to furnish the priority document within a time limit which is reasonable under the circumstances.

Where several priorities are claimed, the priority date to be considered for the purposes of computing the 16-month time limit is the filing date of the earliest application whose priority is claimed.

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2001年2月22日 (22.02.2001)

PCT

(10) 国際公開番号  
WO 01/12141 A1

- |   |                         |   |
|---|-------------------------|---|
| (51) 国際特許分類 <sup>7</sup> :  | A61K 7/06               | (JP). 松岡貴子 (MATSUOKA, Takako) [JP/JP]; 〒512-0911 三重県四日市市生桑町2273-1 Mie (JP). |
| (21) 国際出願番号:  | PCT/JP00/05542          |   |
| (22) 国際出願日:   | 2000年8月18日 (18.08.2000) |   |
| (25) 国際出願の言語:   | 日本語                     |   |
| (26) 国際公開の言語:   | 日本語                     |   |
| (30) 優先権データ:  |                         |   |
| 特願平11/231144  | 1999年8月18日 (18.08.1999) | JP  |
| 特願2000/137711   | 2000年5月10日 (10.05.2000) | JP  |
| (71) 出願人(米国を除く全ての指定国について): 協和醸酵工業株式会社 (KYOWA HAKKO KOGYO CO., LTD.) [JP/JP]; 〒100-8185 東京都千代田区大手町一丁目6番1号 Tokyo (JP).                          |                         |   |
| (72) 発明者; および   |                         |   |
| (75) 発明者/出願人(米国についてのみ): 高橋知也 (TAKA-HASHI, Tomoya) [JP/JP]. 神村彩子 (KAMIMURA, Ayako) [JP/JP]; 〒305-0841 茨城県つくば市御幸が丘2番地 協和醸酵工業株式会社 筑波研究所内 Ibaraki |                         |   |
- (81) 指定国(国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) 指定国(広域): ARIPO 特許 (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI 特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

## 添付公開書類:

— 国際調査報告書

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイドスノート」を参照。

(54) Title: HAIR GROWTH STIMULANTS

(54) 発明の名称: 育毛剤

(57) Abstract: Hair growth stimulants characterized by containing as the active ingredient at least one member selected from among lysophosphatidic acids and phosphatidic acids the fatty acid group moiety of which consists exclusively of fatty acid groups having even-numbered and linear carbon chains.

(57) 要約:

リゾホスファチジン酸および脂肪酸残基部分が偶数かつ直鎖の炭素鎖の脂肪酸残基のみから構成されるホスファチジン酸から選ばれる一つ以上を有効成分として含有することを特徴とする育毛剤。

WO 01/12141 A1

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/05542

A. CLASSIFICATION OF SUBJECT MATTER:  
Int.Cl' A61K 7/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl' A61K 7/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, 4515778 A (Kastell; Wolfgang), 07 May 1985 (07.05.85), & JP, 57-165309, A & EP, 60933, A	1-22
A	EP, 102534, A (LION CORPORATION), 14 March 1984 (14.03.84), & JP, 59-27809 A	1-22
A	DE, 4113346, A (Lang, Erich), 29 October 1992 (29.10.92), (Family: none)	1-22
A	WO, 96/00561, A (KYOWA HAKKO KOGYO CO., LTD.), 11 January, 1996 (11.01.96), & EP, 768079, A	9-11, 13-14, 16-22
A	EP, 797978, A (Kyowa Hakko Kogyo Co., Ltd), 01 October, 1997 (01.10.97), & JP, 9-315947, A	8, 11-22

 Further documents are listed in the continuation of Box C.  See patent family annex.

• Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier document but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 14 November, 2000 (14.11.00)	Date of mailing of the international search report 28 November, 2000 (28.11.00)
---	--

Name and mailing address of the ISA/ Japanese Patent Office	Authorized officer
Faxsimile No.	Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/05542

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

Claims 1 to 4 and 7 pertain to hair growth stimulants containing lysophosphatidic acids or phosphatidic acids which are restricted by a specific structure. Claims 8 to 18 and 20 to 22 pertain to hair growth stimulants containing lysophosphatidic acids or phosphatidic acids which are not restricted by the specific structure as described in claims 1 to 4 and 7. The phosphatidic acids which are one of the choices in claims 8 to 18 and 20 to 22 are not restricted by the specific structure as described in claims 1 to 4 and 7. Such being the case, these two groups of inventions are not considered as relating to a group of inventions so linked as to form a single general inventive concept.

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

## Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

## PATENT COOPERATION TREATY

PCT

**NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT**

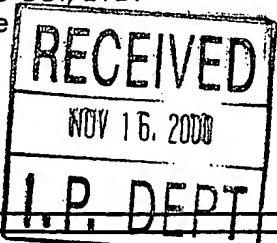
(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Otemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

WPPJD



Date of mailing (day/month/year) 06 November 2000 (06.11.00)	<b>IMPORTANT NOTIFICATION</b>	
Applicant's or agent's file reference 1227		
International application No. PCT/JPO/05542	International filing date (day/month/year) 18 August 2000 (18.08.00)	
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 18 August 1999 (18.08.99)	
Applicant KYOWA HAKKO KOGYO CO., LTD. et al		

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
18 Augu 1999 (18.08.99)	11/231144	JP	05 Octo 2000 (05.10.00)
10 May 2000 (10.05.00)	2000/137711	JP	05 Octo 2000 (05.10.00)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  Khemais BRAHMI  Telephone No. (41-22) 338.83.38
--	---

**RECEIVED**

MAR - 5. 2001

**I. P. DEPT****NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES**

(PCT Rule 47.1(c), first sentence)

WPC  
PLPJD  
PCT**PATENT COOPERATION TREATY**

PCTD

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Otemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

Date of mailing (day/month/year)

22 February 2001 (22.02.01)

Applicant's or agent's file reference

1227

**IMPORTANT NOTICE**

International application No.

PCT/JP00/05542

International filing date (day/month/year)

18 August 2000 (18.08.00)

Priority date (day/month/year)

18 August 1999 (18.08.99)

Applicant

KYOWA HAKKO KOGYO CO., LTD. et al

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

AU,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE,AG,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CR,CU,CZ,DE,DK,DM,DZ,EA,EE,EP,ES,  
FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,

MN,MW,MX,MZ,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 22 February 2001 (22.02.01) under No. WO 01/12141

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

J. Zahra

Telephone No. (41-22) 338.83.38

## VERIFICATION OF A TRANSLATION

I, the below named translator, hereby declare that:

My name and post office address are as stated below:

That I am knowledgeable in the English language and in the language in which the below identified international application was filed, and that I believe the English translation of the international application No. PCT/JP00/05542 is a true and complete translation of the above identified international application as filed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: January 11, 2002

Full name of the translator Akiko Kikuchi  
Signature of the translator Akiko Kikuchi  
Post Office Address c/o Techlex Co., Ltd., 7-6, Koishikawa  
1-chome, Bunkyo-ku, Tokyo 112-0002 Japan

6-T  
Translation  
16/04/9268

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

RECEIVED  
MAY 03 2002

TECH CENTER 1600/2000

JUN 03 2002

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Applicant's or agent's file reference 1227	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP00/05542	International filing date (day/month/year) 18 August 2000 (18.08.00)	Priority date (day/month/year) 18 August 1999 (18.08.99)
International Patent Classification (IPC) or national classification and IPC A61K 7/06		
Applicant KYOWA HAKKO KOGYO CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 16 March 2001 (16.03.01)	Date of completion of this report 27 September 2001 (27.09.2001)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP00/05542

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the claims:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, as amended (together with any statement under Article 19)

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the drawings:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- restricted the claims.
- paid additional fees.
- paid additional fees under protest.
- neither restricted nor paid additional fees.

2.  This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- complied with.
- not complied with for the following reasons:

See supplemental sheet for continuation of Box IV. 3.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- all parts.
- the parts relating to claims Nos. \_\_\_\_\_

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: IV 3.

Claims 1-4 and 7 relate to hair growth stimulants containing lysophosphatidic acid or a phosphatidic acid restricted by having a specified structure, and Claims 8-18 and 20-22 relate to hair growth stimulants containing lysophosphatidic acid or a phosphatidic acid not restricted by the structure specified in Claims 1-4 and 7. Since in one alternative, the phosphatidic acid in Claims 8-18 and 20-22 is not restricted by having a structure specified in Claims 1-4 and 7, these two groups of inventions are not a group of inventions so linked as to form a single general inventive concept.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-22	YES
	Claims		NO
Inventive step (IS)	Claims	1-22	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

## 2. Citations and explanations

## 1. Documents

Document 1: US, 4515778, A (Wolfgang Kastell), 7 May 1985  
(07.05.85)

Document 2: EP, 102534, A (Lion Corp.), 14 March 1984  
(14.03.84)

Document 3: DE, 4113346, A (Erich Lang), 29 October 1992  
(29.10.92)

Document 4: WO, 96/00561, A (Kyowa Hakko Kogyo Co., Ltd.), 11 January 1996 (11.01.96)

Document 5: EP, 797978, A (Kyowa Hakko Kogyo Co., Ltd.), 1 October 1997 (01.10.97)

## 2. Explanation

Document 1 discloses preparations containing phosphatidic acid for preventing hair loss and stimulating hair growth; Document 2 discloses hair nutrients which include phosphatidic acids having fatty acid residues with odd number carbon chains; Document 3 discloses hair growth stimulants which contain a mixture of phospholipids; Document 4 discloses hair growth stimulants which contain proanthocyanidine; and Document 5 discloses hair growth stimulants which contain a specific inhibitor of protein kinase C. However, these documents do not indicate that lysophosphatidic acid and phosphatidic acids wherein the

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fatty acid residues are exclusively fatty acid residues having an even numbered linear carbon chain have a hair growth stimulating effect, nor do they disclose hair growth stimulants combining lysophosphatidic acid or phosphatidic acid with one or more of proanthocyanidine, a specific protein kinase C inhibitor or/and tocopherol.